

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 52. (cancelled)

53. (currently amended) A lithographic printing plate comprising: a substrate; and an infrared-imageable, a single coat self-organized layer featuring a continuous varying distribution of a hydrophilic/oleophilic, ink-receptive polymer material and a hydrophobic/oleophobic ink-repelling polymer material, the distribution being induced by the incompatibility of said materials multilayer infra-red imageable material.

54. (currently amended) A lithographic printing plate according to claim 53, wherein the substrate is aluminum aluminium or polyester.

55. (previously presented) A lithographic printing plate according to claim 54, wherein the substrate is aluminum that is grained and anodised, or the substrate is aluminum that has been treated with phosphoric acid.

56. (previously presented) The lithographic printing plate of claim 54, wherein the substrate is aluminum that is pre-coated with a thermally insulating organic coating.

57. (currently amended) The lithographic printing plate of claim 53, wherein the single coat self-organized multilayer layer contains at least one of: a poly dimethyl siloxane, a hydrophilic polymer, and an infrared absorbing dye or mixture of dyes.

58. (currently amended) A lithographic printing plate of claim 53, wherein said single coat self-organized multilayer infra-red imageable material said hydrophobic/oleophobic ink-repelling polymer material comprises a silicone polymer polymers and said hydrophilic/oleophilic, ink-receptive polymer material comprises a non-silicone polymer polymers.

59. (previously presented) The lithographic printing plate of claim 58, wherein the non-silicone polymer is nitrocellulose or a mixture of nitrocelluloses.

60. (previously presented) The lithographic printing plate of claim 58, where the non-silicone polymer is hydrophilic, or oleophilic.

61. (previously presented) The lithographic printing plate of claim 58, which on selective imaging by infra-red ablation gives oleophilic image areas formed by the surface of the substrate, and oleophobic non-image areas formed from unablated silicone.

62. (previously presented) The lithographic printing plate of claim 58, which on selective imaging by infra-red ablation gives oleophilic image areas formed by the non-silicone polymer-enriched surface directly attached to the substrate exposed by the image ablation process and oleophobic non-imaged areas formed from unablated silicone.

63. (previously presented) The lithographic printing plate of claim 58, which on selective ablation by infra-red radiation gives hydrophilic ablated (background) areas formed by the surface of the substrate, and oleophilic non-ablated (image) areas formed from unablated silicone.

64. (previously presented) The lithographic printing plate of claim 58, which on selective ablation by infra-red radiation gives hydrophilic ablated (background) areas formed by the non-silicone polymer-enriched surface directly attached to the substrate exposed by the ablation process and oleophilic non-ablated (image) areas formed from unablated silicone.

65. (currently amended) A method of forming a lithographic printing plate, comprising providing a substrate, and applying forming on said substrate, an infrared-imageable, a single coat self-organizing layer that features a varying distribution of a hydrophilic/oleophilic, ink-receptive polymer material and a hydrophobic/oleophobic ink-repelling polymer material, the distribution being

induced by the incompatibility of said materials infra-red imageable material onto
said substrate.

66. (currently amended) The method of claim 65, wherein the substrate is aluminum aluminium or the substrate is polyester.

67. (currently amended) The method of claim 66, wherein the substrate is aluminum that is grained and anodised or the substrate is aluminum aluminium that has been treated with phosphoric acid.

68. (currently amended) The method of claim 65, wherein the substrate is aluminum aluminium and the method additionally comprises the step of pre-coating the aluminum with a thermally insulating organic coating.

69. (currently amended) The method of claim 65, wherein the single coat self-organizing layer contains at least one of: a poly dimethyl siloxane, a hydrophilic polymer, and an infrared absorbing dye or mixture of dyes.

70. (currently amended) The method of claim 65, wherein said single coat self-organizing infra-red imageable material said hydrophobic/oleophobic ink-repelling polymer material comprises a silicone polymer polymers and said hydrophilic/oleophilic, ink-receptive polymer material comprises a non-silicone polymer polymers.

71. (previously presented) The method of claim 70, wherein the non-silicone polymer is nitrocellulose or a mixture of nitrocelluloses.

72. (previously presented) The method of claim 70, where the non-silicone polymer is hydrophilic or oleophilic.

73. (currently amended) The method of claim 65, wherein the self-organizing layer infra-red material is deposited from a mixture of at least two volatile organic solvents.

74. (currently amended) The method of claim 73, wherein said ~~single coat~~ self-organizing layer material additionally contains a poly dimethyl siloxane, said poly dimethyl siloxane soluble in at least one of said mixture solvents.

75. (previously presented) The method of claim 74, wherein said hydrophilic/oleophilic, ink-receptive polymer material comprises a the non-silicone polymer that is soluble in at least one of said mixture solvents.

76. (previously presented) The method of claim 74, wherein the ingredients of said self-organizing layer are diluted in additionally comprising the step of diluting the a solvent mixture selected in order to permit all of the ingredients to remain in solution for at least 8 hours prior to application to said substrate.

77. (currently amended) The method of claim 65, wherein the ~~single coat~~ self-organizing layer material contains a poly dimethyl siloxane and an infra-red absorbing dye or mixture of dyes that are chosen so that they do not inhibit the curing of the poly dimethyl siloxane.

78. (currently amended) The method of claim 65, additionally comprising the step of heating said applied self-organizing layer infra-red imageable material, wherein the layer material organizes itself into an infinite number of horizontal layers constituting a self-organized system.

79. (currently amended) The method of claim 70, additionally comprising the step of heating said applied self-organizing layer infra-red imageable material, wherein the layer material organizes itself into an infinite number of horizontal layers constituting a self-organized system having a mixture rich in poly methyl siloxane on its surface and a mixture rich in non-silicone polymer in proximity to the substrate surface.